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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,680

06/13/2006

Andre Vioux

0508-1153

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466

7590

01/22/2009

YOUNG & THOMPSON

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EXAMINER

NOLAN, JASON MICHAEL

ART UNIT

PAPER NUMBER

1626

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/562,680	<b>Applicant(s)</b> VIOUX ET AL.	
	<b>Examiner</b> JASON NOLAN	<b>Art Unit</b> 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 24-49 is/are pending in the application.
- 4a) Of the above claim(s) 24-40 and 47-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 41 and 42 is/are rejected.
- 7) ☒ Claim(s) 43-46 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/28/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This Office Action is responsive to Applicant's Response to Restriction Requirement, filed 09/18/2008. As presented, New Claims 24-49 are pending in the instant application and Claims 1-23 are cancelled.

#### ***Information Disclosure Statement***

Applicants' information disclosure statement (IDS), filed on 12/28/2005 has been considered. Please refer to Applicants' copy of the 1449 submitted herein.

#### ***Response to Restriction***

Applicants' election with traverse of Group II: Claims 41-46 is acknowledged. Applicants' traversal is based on the following arguments: the common structural feature for the instant claims is ionogels, which is not taught in the Dai et al. reference. Therefore, there is no lack of unity of invention pertaining to the Dai et al. reference.

In response, the Examiner points out that Ionogels, as defined in the specification on page 2, line 15, are materials comprising a continuous solid skeleton that contain an ionic liquid. As pointed out by Applicant, Dai et al. teaches a method of synthesizing silica-based aerogels. Aerogels are low-density solid-state materials. Applicant states that the entrapped ionic liquid was extracted with acetonitrile to afford the final aerogel product. However, Applicant fails to appreciate the nature of the material before the entrapped ionic liquid was extracted from the aerogel. Before extraction, the material comprises a continuous solid skeleton containing an ionic liquid; thus teaching the

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special technical feature of the instant invention – an ionogel – as defined in the instant specification. Therefore, lack of unity of invention was properly made and the restriction between Groups I-V is proper and maintained herein. Group II: Claims 41-46 is the elected subject matter; therefore, Groups I & III-V: Claims 24-40 & 47-49 are withdrawn as being non-elected inventions.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 41 & 42 are rejected under 35 U.S.C. § 102(b) as being anticipated by Dai *et al.* (Chem. Comm. 2000, 243-244; see IDS). It is noted that Claim 41, and the dependant claims thereof, is a product-by-process claim. “Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); see MPEP 2113.

Dai et al. teaches a method of synthesizing silica-based aerogels. Aerogels are low-density solid-state materials. Before the entrapped ionic liquid was extracted from the aerogel, the material comprises a continuous solid skeleton containing an ionic liquid. Dai et al. specifically used 1-ethyl-3-methylimidazolium bis[(trifluoromethyl)sulfonyl]amide as the ionic liquid – a preferred component in Claim 42. The material is characterized as “a transparent monolith glass,” (see instant Claim 43). The reference is silent with respect to the other properties of instant Claims 43-46.

Claim 41 is rejected under 35 U.S.C. § 102(b) as being anticipated by Wang *et al.* (Chem. Comm. 2002, 2972-2973). Claim 41 is a product-by-process claim. “Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); see MPEP 2113.

Wang et al. teaches a method of synthesizing “an all solid state device” comprising a PVDF-HFP polymer filled with the ionic liquid MP11. The instant specification defines “Ionogel” as a continuous solid skeleton containing an ionic liquid. Claim 41 states the same, “an ionic liquid, confined within a continuous solid network formed from at least one molecular precursor.” The material disclosed by Wang et al. fulfills the claim limitations and is therefore anticipatory.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 42 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Said claims recite the language “the derivatives of the elements of groups 13, 14, and 15 of the periodic table, or transition metal derivatives” and the scope of this term is unclear, such that it fails to define the metes and bounds of its limitation. There are, conceivably, infinite derivatives of each of said elements. Therefore, the scope is unclear. More distinctive terms include, for example:  $\text{Al}(\text{C}_2\text{H}_5)_3$ .

***Claim Objections***

Claims 43-46, drawn to the properties of the product in Claim 41, are objected to as being dependent upon a rejected base.

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***Telephone Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Nolan whose telephone number is (571) 272-4356 and e-mail is [Jason.Nolan@uspto.gov](mailto:Jason.Nolan@uspto.gov). The examiner can normally be reached on Mon - Fri (9:00 - 5:30PM). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph M<sup>c</sup>Kane can be reached on (571) 272-0699. The USPTO fax number for applications is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system, (either Private PAIR or Public PAIR). Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. For questions on Private PAIR system, contact the Electronic Business Center at (866) 217-9197.

/Jason M. Nolan/

Examiner, Art Unit 1626

/Rebecca L Anderson/

Primary Examiner, Art Unit 1626